

Translation

PATENT COOPERATION TREATY

PCT/EP2003/008369



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 031335woMemh	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/008369	International filing date (<i>day/month/year</i>) 29 July 2003 (29.07.2003)	Priority date (<i>day/month/year</i>) 30 July 2002 (30.07.2002)
International Patent Classification (IPC) or national classification and IPC B01D 9/02		
Applicant HOFFMANN, Kurt		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I. ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 25 February 2004 (25.02.2004)	Date of completion of this report 22 October 2004 (22.10.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-32, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages 1-21, filed with the letter of 28 September 2004 (28.09.2004)
- ☒ the drawings:
 pages 1/12-12/12, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☒ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☐ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-16, 19, 21

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: IV

D1: US-A-5 011 663

D2: DE-A-30 09 763 (appended)

The present international application does not meet the requirements of PCT Rule 13.1 and 13.2 ("requirement of unity of invention"):

1. The shared features of independent claims 13 and 17 define a device in which a plurality of sample vessels are arranged on a sample support and each sample vessel has at least one partial region that is separated from the remaining sample vessel by lateral intermediate walls, the lateral intermediate walls being lower towards the top than the lateral walls of the sample vessel. Such devices are not novel, however, but are known, for example, from publication D1 (cf. claim 1). The subjects defined in claims 13 and 17 are therefore not so linked as to form a single general inventive concept.
2. The subject matter of claim 3 does not comprise all the features of claim 1 and is therefore an independent claim pursuant to PCT Rule 6.4(a). The same applies to claim 20, which is considered independent from claim 19. Whereas the subjects of claims 1 and 3 form a shared inventive concept (cf. Box V, point 1 of this examination report), this does not apply to the subjects of claims 19 and 20 (cf. Box V, point 3 of this examination report).

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: IV

3. The present set of claims thus comprises three groups of subjects which do not meet the requirements of PCT Rule 13.1 and 13.2:

Group 1: comprising independent method claims 1 and 3, independent device claim 13, independent product claim 19, independent use claim 21, and dependent claims 2, 4-12 and 14-16;

Group 2: comprising independent device claim 17, independent use claim 21 and dependent claim 18;

Group 3: comprising independent product claim 20 and independent use claim 21.

4. Since no additional examination fees were paid, the examination is based on the subject matter first indicated in the claims, that is, the subject matter defined in Group 1.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-16, 21	YES
	Claims	19	NO
Inventive step (IS)	Claims	1-16, 21	YES
	Claims	19	NO
Industrial applicability (IA)	Claims	1-16, 19, 21	YES
	Claims		NO

2. Citations and explanations

1. It is assumed that, in claim 13, a continuous circumferential rim is meant (PCT Article 6).
2. The crystallisation of macromolecules such as, for example, proteins has hitherto been carried out, as is described in the application, by "hanging drop" or "sitting drop" methods, wherein the systems are sealed by, for example, siliconised glass lids or self-adhesive films. The preparation of the system and the introduction of the macromolecule solution as a drop into the system is, however, relatively complicated. The claimed method intends to simplify this. To this end, the drop is introduced in the middle phase of a three-phase system. There, the drop is stabilised and supported, whilst the diffusion of water out of the drop through the middle phase into the lower phase which receives the water leads to the saturation of the drop. The upper phase protects the system against the environment. Since this procedure cannot be derived from the available documents either alone or in combination, claim 1 meets the requirements of PCT Article 33(2) to (4).

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3. Claim 13 relates to a specially formed vessel which comfortably allows the method according to claim 1 to be carried out simultaneously in parallel units. The device is not anticipated by the available documents. The device disclosed in publication D1 lacks the continuous circumferential rim which is higher than the openings of the sample vessel (cf. point 1 above) and allows a simple and time-saving introduction of the uppermost phase. A corresponding modification of the device as per D1 cannot be considered obvious, since there is no motivation therefor. Claim 13 therefore meets the requirements of PCT Article 33(2) to (4).
3. Three-phase systems as per claim 19 may occur in nature, but are in any case known from publication D2 (cf. example 1). Claim 19 does not meet the requirements of PCT Article 33(2).
4. Insofar as it relates to the use of a novel and inventive method or a novel and inventive device, claim 21 also meets the requirements of PCT Article 33(2) to (4).
5. The requirements of PCT Article 33(2) to (4) are also considered to be met by the claims that are dependent on claims 1 and 13.